Archie R Portis

List of Publications by Year
in descending order

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70 papers	8,039 citations	57631 44 h-index	102304 66 g-index
76 all docs	76 docs citations	76 times ranked	6950 citing authors

#	Article	IF	Citations
1	Frontiers, Opportunities, and Challenges in Biochemical and Chemical Catalysis of CO₂ Fixation. Chemical Reviews, 2013, 113, 6621-6658.	23.0	1,786
2	ArabidopsisÂthaliana expressing a thermostable chimeric Rubisco activase exhibits enhanced growth and higher rates of photosynthesis at moderately high temperatures. Photosynthesis Research, 2009, 100, 143-153.	1.6	127
3	Cool C4 Photosynthesis: Pyruvate Pi Dikinase Expression and Activity Corresponds to the Exceptional Cold Tolerance of Carbon Assimilation inMiscanthusÃ—giganteusÂ Â Â. Plant Physiology, 2008, 148, 557-567.	2.3	143
4	An Increase In Expression Of Pyruvate Pi Dikinase Corresponds To Cold-Tolerant C4 Photosynthesis Of Miscanthus X Giganteus. , 2008, , 845-849.		0
5	Can the cold tolerance of C4 photosynthesis in Miscanthusxgiganteus relative to Zea mays be explained by differences in activities and thermal properties of Rubisco?. Journal of Experimental Botany, 2007, 59, 1779-1787.	2.4	49
6	A Novel Nucleus-Encoded Chloroplast Protein, PIFI, Is Involved in NAD(P)H Dehydrogenase Complex-Mediated Chlororespiratory Electron Transport in Arabidopsis. Plant Physiology, 2007, 144, 1742-1752.	2.3	37
7	Regulation of Rubisco activase and its interaction with Rubisco. Journal of Experimental Botany, 2007, 59, 1597-1604.	2.4	205
8	Discoveries in Rubisco (Ribulose 1,5-bisphosphate carboxylase/oxygenase): a historical perspective. Photosynthesis Research, 2007, 94, 121-143.	1.6	138
9	Identification of critical arginine residues in the functioning of Rubisco activase. Archives of Biochemistry and Biophysics, 2006, 450, 176-182.	1.4	22
10	Kinetic Analysis of the Slow Inactivation of Rubisco During Catalysis: Effects of Temperature, O2 and Mg++. Photosynthesis Research, 2006, 87, 195-204.	1.6	36
11	Two conserved tryptophan residues are responsible for intrinsic fluorescence enhancement in Rubisco activase upon ATP binding. Photosynthesis Research, 2006, 88, 185-193.	1.6	7
12	Increased Sensitivity of Oxidized Large Isoform of Ribulose-1,5-bisphosphate Carboxylase/Oxygenase (Rubisco) Activase to ADP Inhibition Is Due to an Interaction between Its Carboxyl Extension and Nucleotide-binding Pocket. Journal of Biological Chemistry, 2006, 281, 25241-25249.	1.6	29
13	Effect of activase level and isoform on the thermotolerance of photosynthesis in Arabidopsis. Journal of Experimental Botany, 2006, 57, 3793-3799.	2.4	53
14	Two Residues of Rubisco Activase Involved in Recognition of the Rubisco Substrate. Journal of Biological Chemistry, 2005, 280, 24864-24869.	1.6	47
15	Temperature Dependence of Photosynthesis in Arabidopsis Plants with Modifications in Rubisco Activase and Membrane Fluidity. Plant and Cell Physiology, 2005, 46, 522-530.	1.5	149
16	The discovery of Rubisco activase â€" yet another story of serendipity. Advances in Photosynthesis and Respiration, 2005, , 851-858.	1.0	9
17	Enhanced translation of a chloroplast-expressed RbcS gene restores small subunit levels and photosynthesis in nuclear RbcS antisense plants. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 6315-6320.	3.3	180
18	Oxygen-dependent H2O2production by Rubisco. FEBS Letters, 2004, 571, 124-128.	1.3	73

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19	Rubisco Activase. , 2004, , 1117-1119.		0
20	Rubisco activase - Rubisco's catalytic chaperone. Photosynthesis Research, 2003, 75, 11-27.	1.6	494
21	The life of ribulose 1,5-bisphosphate carboxylase/oxygenaseâ€”posttranslational facts and mysteries. Archives of Biochemistry and Biophysics, 2003, 414, 150-158.	1.4	86
22	Light modulation of Rubisco in Arabidopsis requires a capacity for redox regulation of the larger Rubisco activase isoform. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 3330-3334.	3.3	186
23	Temperature Response of Mesophyll Conductance. Implications for the Determination of Rubisco Enzyme Kinetics and for Limitations to Photosynthesis in Vivo. Plant Physiology, 2002, 130, 1992-1998.	2.3	659
24	Complementation of the Nuclear Antisense rbcS-Induced Photosynthesis Deficiency by Introducing an rbcS Gene into the Tobacco Plastid Genome. Plant and Cell Physiology, 2002, 43, 1302-1313.	1.5	34
25	The discovery of Rubisco activase - yet another story of serendipity. Photosynthesis Research, 2002, 73, 257-264.	1.6	28
26	Characterization of the regulatory function of the 46-kDa isoform of Rubisco activase from Arabidopsis. Photosynthesis Research, 2001, 68, 29-37.	1.6	60
27	Targeting a Nuclear Anthranilate Synthase Î±-Subunit Gene to the Tobacco Plastid Genome Results in Enhanced Tryptophan Biosynthesis. Return of a Gene to Its Pre-Endosymbiotic Origin. Plant Physiology, 2001, 127, 131-141.	2.3	64
28	Alteration of the Adenine Nucleotide Response and Increased Rubisco Activation Activity of Arabidopsis Rubisco Activase by Site-Directed Mutagenesis1. Plant Physiology, 2000, 123, 1077-1086.	2.3	25
29	Activase Region on Chloroplast Ribulose-1,5-bisphosphate Carboxylase/Oxygenase. Journal of Biological Chemistry, 2000, 275, 26241-26244.	1.6	56
30	Potent Inhibition of Ribulose-Bisphosphate Carboxylase by an Oxidized Impurity in Ribulose-1,5-Bisphosphate1. Plant Physiology, 1998, 117, 1059-1069.	2.3	105
31	Specificity for Activase Is Changed by a Pro-89 to Arg Substitution in the Large Subunit of Ribulose-1,5-bisphosphate Carboxylase/Oxygenase. Journal of Biological Chemistry, 1997, 272, 17033-17037.	1.6	68
32	The regulation of Rubisco by Rubisco activase. Journal of Experimental Botany, 1995, 46, 1285-1291.	2.4	123
33	Characteristics of the Interaction between Rubisco and Rubisco Activase. , 1995, , 3933-3938.		0
34	Mg2+ and ATP or adenosine 5â€²-[Î³-thio]-triphosphate (ATPÎ³S) enhances intrinsic fluorescence and induces aggregation which increases the activity of spinach Rubisco activase. BBA - Proteins and Proteomics, 1993, 1202, 47-55.	2.1	54
35	Species-Dependent Variation in the Interaction of Substrate-Bound Ribulose-1,5-Bisphosphate Carboxylase/Oxygenase (Rubisco) and Rubisco Activase. Plant Physiology, 1992, 100, 1858-1862.	2.3	95
36	Dissociation of Ribulose-1,5-Bisphosphate Bound to Ribulose-1,5-Bisphosphate Carboxylase/Oxygenase and Its Enhancement by Ribulose-1,5-Bisphosphate Carboxylase/Oxygenase Activase-Mediated Hydrolysis of ATP. Plant Physiology, 1992, 99, 1348-1353.	2.3	99

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37	A fluorometric study with 1-anilinonaphthalene-8-sulfonic acid (ANS) of the interactions of ATP and ADP with rubisco activase. BBA - Proteins and Proteomics, 1991, 1079, 263-267.	2.1	17
38	Activation of Ribulose-1,5-Bisphosphate Carboxylase/Oxygenase (Rubisco) by Rubisco Activase. Plant Physiology, 1990, 94, 245-250.	2.3	22
39	Activity of Ribulose 1,5-Bisphosphate Carboxylase Oxygenase as a Function of Storage Conditions. Plant Physiology, 1990, 93, 1511-1513.	2.3	7
40	Impaired reductive activation of stromal bisphosphatases in tomato leaves following low-temperature exposure at high light. Archives of Biochemistry and Biophysics, 1990, 282, 302-308.	1.4	103
41	Partial reduction in ribulose 1,5-bisphosphate carboxylase/oxygenase activity by carboxypeptidase A. Archives of Biochemistry and Biophysics, 1990, 283, 397-400.	1.4	19
42	Rubisco activase. Biochimica Et Biophysica Acta - Bioenergetics, 1990, 1015, 15-28.	0.5	92
43	Ribulose-1,5-Bisphosphate Carboxylase/Oxygenase Activase Protein Prevents the in Vitro Decline in Activity of Ribulose-1,5-Bisphosphate Carboxylase/Oxygenase. Plant Physiology, 1989, 90, 968-971.	2.3	83
44	Adenosine triphosphate hydrolysis by purified rubisco activase. Archives of Biochemistry and Biophysics, 1989, 268, 93-99.	1.4	139
45	Release of the nocturnal inhibitor, carâ˜yarabinitol-1 -phosphate, from ribulose bisphosphate carâ˜ylase/oxygenase by rubisco activase. FEBS Letters, 1988, 233, 413-416.	1.3	90
46	Purification and Assay of Rubisco Activase from Leaves. Plant Physiology, 1988, 88, 1008-1014.	2.3	87
47	Effects of Irradiance and Methyl Viologen Treatment on ATP, ADP, and Activation of Ribulose Bisphosphate Carboxylase in Spinach Leaves. Plant Physiology, 1988, 88, 850-853.	2.3	52
48	Protein-Bound Ribulose Bisphosphate Correlates with Deactivation of Ribulose Bisphosphate Carboxylase in Leaves. Plant Physiology, 1988, 87, 244-249.	2.3	76
49	Involvement of Stromal ATP in the Light Activation of Ribulose-1,5-Bisphosphate Carboxylase/Oxygenase in Intact Isolated Chloroplasts. Plant Physiology, 1988, 86, 293-298.	2.3	91
50	Rubisco Activase Mediates ATP-Dependent Activation of Ribulose Bisphosphate Carboxylase. Plant Physiology, 1987, 85, 152-154.	2.3	140
51	Purification and Species Distribution of Rubisco Activase. Plant Physiology, 1987, 84, 930-936.	2.3	143
52	Inhibition of the Photosynthetic Activities of Isolated Spinach Chloroplasts by Phosphonate Compounds. Plant Physiology, 1987, 84, 649-653.	2.3	15
53	Stimulation of thylakoid energization and ribulose-bisphosphate carboxylase/oxygenase activation inArabidopsisleaves by methyl viologen. FEBS Letters, 1987, 221, 215-220.	1.3	22
54	Rubisco Activase; Purification, Subunit Composition and Species Distribution. , 1987, , 379-382.		1

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55	Purification of ribulose-1,5-bisphosphate carboxylase/oxygenase with high specific activity by fast protein liquid chromatography. Analytical Biochemistry, 1986, 153, 97-101.	1.1	45
56	Light and CO2 Response of Ribulose-1,5-Bisphosphate Carboxylase/Oxygenase Activation in Arabidopsis Leaves. Plant Physiology, 1986, 80, 655-659.	2.3	130
57	Exchange Properties of the Activator CO2 of Spinach Ribulose-1,5-Bisphosphate Carboxylase/Oxygenase. Plant Physiology, 1986, 80, 707-710.	2.3	12
58	Activation of Ribulosebisphosphate Carboxylase/Oxygenase at Physiological CO₂ and Ribulosebisphosphate Concentrations by Rubisco Activase. Plant Physiology, 1986, 82, 967-971.	2.3	191
59	A soluble chloroplast protein catalyzes ribulosebisphosphate carboxylase/oxygenase activation in vivo. Photosynthesis Research, 1985, 7, 193-201.	1.6	230
60	Regulation of Photosynthetic Carbon Metabolism under Photorespiratory and Non-photorespiratory Conditions: the Role of Phosphate and Triose Phosphates. , 1984, , 821-824.		2
61	Analysis of the Role of the Phosphate Translocator and External Metabolites in Steady-State Chloroplast Photosynthesis. Plant Physiology, 1983, 71, 936-943.	2.3	17
62	A Mutant of Arabidopsis thaliana Which Lacks Activation of RuBP Carboxylase In Vivo. Plant Physiology, 1982, 70, 381-387.	2.3	167
63	Effects of the Relative Extrachloroplastic Concentrations of Inorganic Phosphate, 3-Phosphoglycerate, and Dihydroxyacetone Phosphate on the Rate of Starch Synthesis in Isolated Spinach Chloroplasts. Plant Physiology, 1982, 70, 393-396.	2.3	23
64	Evidence of a Low Stromal Mg²⁺ Concentration in Intact Chloroplasts in the Dark. Plant Physiology, 1981, 67, 985-989.	2.3	95
65	Assay of nucleotides and other phosphate-containing compounds in isolated chloroplasts by ion exchange chromatography. Analytical Biochemistry, 1980, 101, 278-287.	1.1	32
66	Fructose-and sedoheptulosebisphosphatase. The sites of a possible control of CO2 fixation by light-dependent changes of the stromal Mg2+ concentration. Biochimica Et Biophysica Acta - Bioenergetics, 1977, 461, 313-325.	0.5	105
67	Light-dependent changes of the Mg2+ concentration in the stroma in relation to the Mg2+ dependency of CO2 fixation in intact chloroplasts. Biochimica Et Biophysica Acta - Bioenergetics, 1976, 449, 434-446.	0.5	249
68	Conformational changes in coupling factor 1 may control the rate of electron flow in spinach chloroplasts. Biochemical and Biophysical Research Communications, 1975, 64, 877-884.	1.0	57
69	Effects of Adenine Nucleotides and of Photophosphorylation on H+ Uptake and the Magnitude of the H+ Gradient in Illuminated Chloroplasts. Journal of Biological Chemistry, 1974, 249, 6250-6254.	1.6	117
70	On the pH-dependence of the light-induced hydrogen ion gradient in spinach chloroplasts. Archives of Biochemistry and Biophysics, 1973, 156, 621-625.	1.4	35